

FIGURE 1

CGAAAAGAAAAATGGCTTTGAATTTTAATGCCATCGCCTCGAAATCTCAGAAGCTCCCT 60
M A L N F N A I A S K S Q K L P
TGCTTTGCTCTTCCACCAAAGGCCACCCTTAGATCTCCCAAGTTTCCATGATCTCCACC 120
C F A L P P K A T L R S P K F S M I S T
ATTCTTCTGGCTCCAAAGAGGTTGGGAATCTGAAAAAGCCTTTCACGCCTCCAAAGGAG 180
I P S G S K E V G N L K K P F T P P K E
GTGCTTGTTCAGATCACCCACTCCATGCCGCCTCACAAGATTGAGATCTTTAAATCTTTG 240
V P V Q I T H S M P P H K I E I F K S L
GAGGGCTGGGCTGAGAACAACATTCTGACTCACCTCAAACCAGTTGAGAAATGTTGGCAA 300
E G W A E N N I L T H L K P V E K C W Q
CCCGCCGACTTTCTTCCAGATCCTAATTCTGATGGATTTTCATGAGCAAGTCAAAGAGCTT 360
P A D F L P D P N S D G F H E Q V K E L
AGGGAAAGGGCAAAGGAGATCCCAGATGATTACTTTGTAGTTTGGTTGGTGATATGATC 420
R E R A K E I P D D Y F V V L V G D M I
ACCGAGGAAGCCCTTTCAACTTATCAAACAATGCTTAATACCTTGGATGGAACCTCGTGAT 480
T E E A L S T Y Q T M L N T L D G T R D
GAGACAGGTCTAGCCTTACCCCTTGGGCCATTTGGACCAGGGCTTGGACTGCTGAAGAA 540
E T G A S L T P W A I W T R A W T A E E
AACAGGCATGGTGATCTGCTTAATAAGTATCTCTACTTGTCTGGGAGAGTGGACATGAGG 600
N R H G D L L N K Y L Y L S G R V D M R
CAAATTGAGAGGACAATCCAGTACTTGATTGGATCGGSAATGGATCCTCATACAGAGAAT 660
Q I E R T I Q Y L I G S G M D P H T E N
AGTCCTTACCGAGGATTTCATATATACTTCGTTCCAAGAAAGGGCAACTTTTATTTCCCAT 720
S P Y R G F I Y T S F Q E R A T F I S H
GGGAATACAGGCAGGCTGGCTAAGGAGTATGGGGATATTAAGTGGCTCAAATTTGTGGT 780
G N T G R L A K E Y G D I N L A Q I C G
AGCATTGCCTCAGATGAGAAGCGCCACGAGACAGCCTATACCAAATCGTTGAAAAGCTG 840
S I A S D E K R H E T A Y T K I V E K L
TTTGAGATTGATCCTGATGAACAGTCTTGGCTGACATGATGAAGAAGAAAATC 900
F E I D P D E T V L A F A D M M K K K I
GCCATGCCGGCTGAGTTCATCTATGATGGCAGAGATTATACTTATTTGACCACTACTCA 960
A M P A E F I Y D G R D Y N L F D H Y S
GCTGTTGCCCAAAGAATCGGGGTTTACACTGCTAAGGACTATGTTGATATAGTAGAGCAC 1020
A V A Q R I G V Y T A K D Y V D I V E H
CTGGTGGATCGATGGAAGGTGAAGGAGCTAGCTGGGCTTTCAGCCGAGGGGCGTAAGCT 1080
L V D R W K V K E L A G L S A E G R K A
CAGGACTACTTGTGTTCACTTCCTTCGAGAATTAGAAGGTTAGAGGAGAGAGCGCAAGAA 1140
Q D Y L C S L P S R I R R L E E R A Q E
AAGGCCAAGGAAGCACCCAGTGTCCCATTCAGTTGGATATTTGATAGAGAAGTGAACTT 1200
K A K E A P S V P F S W I F D R E V K L
TAGGTCATGAAATACAGTTAAGACTCCTGCAATGCATTTGAGGAAACAAACACGAAGAAG 1260
*
CTGAATGCCAACTTCTCTTTATATATCCGATGTAATAGAGGTTGTATATGTAACAGGAGG 1320
AATTGCGTGGCTTTGGTTAGGGTAGCACATGTTTTCTGGATGTGTTGTGTCTTAAAAAA 1380
TAATGCCGATAGCGGCAGCTGTGATAGTTTTAGATGTTTGTTCATAATGTCTGTTATA 1440
TCGTTGTACGAGTAGTATGTGTTGTTTTGTTGAAACAATCTTCATATCTTAGTGATAAA 1500
TGATAATGCTGTGTAGTCATAGTTTTTAGTTTTGCAATAAAAAAAAAAAAAAAAAA 1553

FIGURE 2

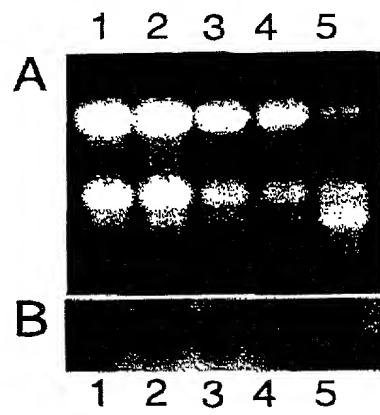


FIGURE 3

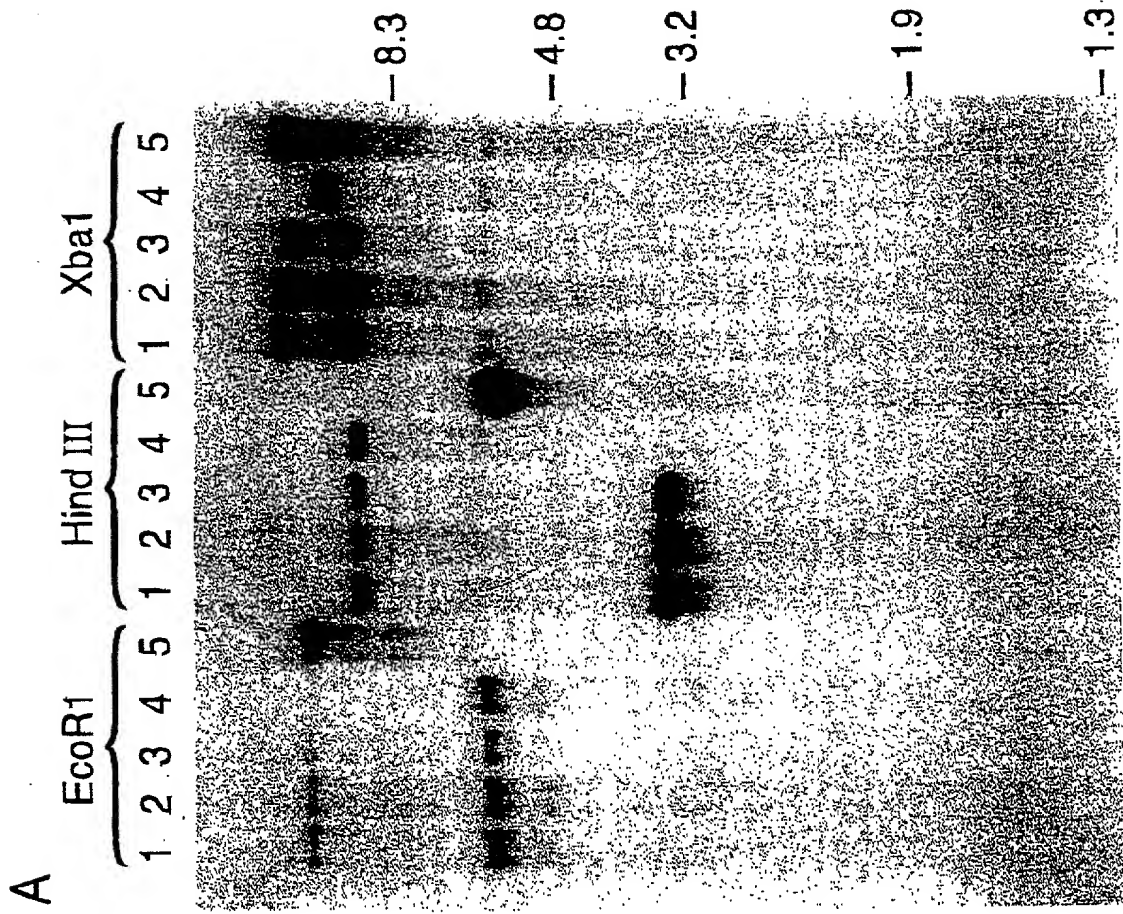


FIGURE 4A

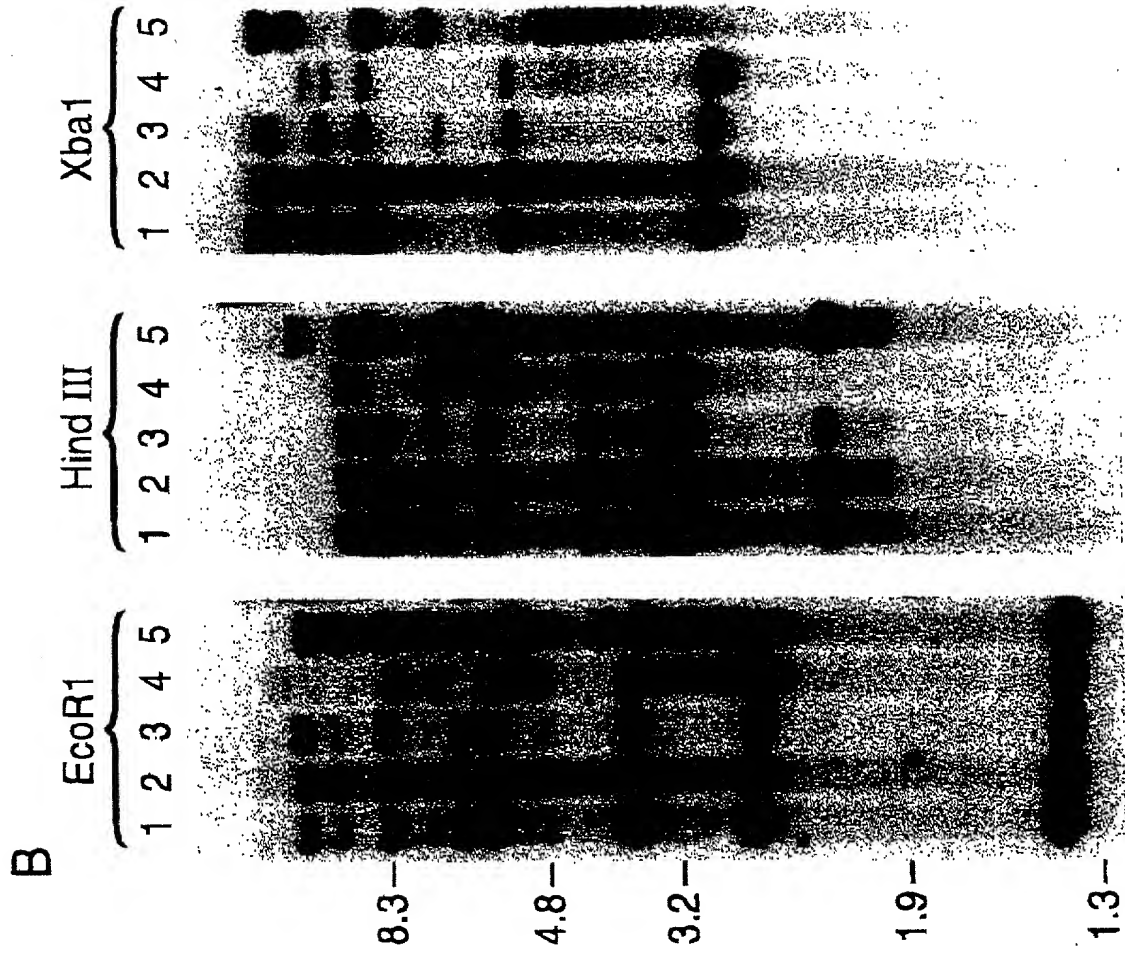


FIGURE 4B

CTCGCCCAAAACCAACACGCGCTTCTTTGCCTCGTGTTTCATCACCTGGCGTTAAACTGCT 60
TTCTTTTAAAGCCAGCAAAATGGGTGCCGGTGGTAGGATGCCAATTGACGGTATAAAGGAG 120
M G A G G R M P I D G I K E
GAAATCGAGGCTCGGTCAATCGAGTTCGATCGAGAAGCCTCCGTTTACGCTCGGTGAG 180
E N R G S V N R V P I E K P P F T L G Q
ATCAAGCAAGCCATTCCGCCCCACTGTTTTCGCCGCTCCCTCCTTCGATCCTTCTCCTAC 240
I K Q A I P P H C F R R S L L R S F S Y
GTGGTCCATGACCTATGCTTAGCCTCTTTCTTTTACTACATTGCAACATCATATTTTCAC 300
dl2A4 primer
V V H D L C L A S F F Y Y I A T S Y F H
TTTCTCCCAACCCCTTTTCTTACATTGCTTGGCCTGTCTATTGGGTCTCCAAGGTGTC 360
F L P Q P F S Y I A W P V Y W V L Q G C
ATCCTCACC GGTTGTTGGGTTCATCGCACACGAGTGGGGTCACCACGCTTTCAGAGACTAC 420
I L T T G V W V I A H E W G H H A F R D Y
CAATGGTTGACGACACCGGTTGATCCTTCATTCCGCCCTTTTAGTCCCGTACTTC 480
Q W V D D T V G L I L H S A L L V P Y F
TCGTGGAAATCAGTCACCGCGCTCACCCTCGAACACCGGTTCCATGGAGCGTGACGAA 540
S W K I S H R R H H S N T G S M E R D E
GTATTCGTGCCCAACCCCAAGTCTAAATTATCATGCTTTGCGAAATACTTAAACAATCCA 600
V F V P K P K S K L S C F A K Y L N N P
CCCGTCCGAGTCTATCTCTTGTAGTCACATTGACTCTTGGTTGGCCTATGTACTTAGCC 660
P G R V L S L V V T L T L G W P M Y L A
TTCAACGTTTCGGGTGCGATACTATGATCGATTAGCTTCCCACTATAACCCCTTATGGCCCC 720
F N V S G R Y Y D R L A S H Y N P Y G P
ATTTACTCCGATCGCGAGAGGCTACAAGTTTACATCTCCGATACTGGTATATTTGCGGTA 780
I Y S D R E R L Q V Y I S D T G I F A V
ATTTATGTACTTTATAAGATTGCTGCAACAAAGGGCTGGCTTTTATGCACTTAT 840
I Y V L Y K I A A T K G L A W L L C T Y
GGGGTGCCTCTACTTATTGTGAATGCCTTCCTTGTGTTGATCACCTACTTGCAACATACT 900
G V P L L I V N A F L V L I T Y L Q H T
CACTCGGCATTGCCGCAATTATGACTCGTCCGAATGGGATTGGTTGCGAGGAGCATTGTGCG 960
H S A L P H Y D S S E W D W L R G A L S
ACGATGGAATCGAGATTTCGGGGTGTGAACAAAGTGTCCATAACATCACCGATACGCAT 1020
T M D R D F G V L N K V F H N I T D T H
GTTGCTCATCACCTCTTCTCAACGATGCCACATTATCATGCAATGGAGGCCACTAAAGCA 1080
V A H H L F S T M P H Y H A M E A T K A
ATCAAACCAATACTCGGCAAGTATTATCCTTTTCGACGGGACACCGATTTACAAGGCAATG 1140
I K P I L G K Y Y P F D G T P I Y K A M
TGGAGGGAGGCAAAAGAGTGCCTTTACGTTGAGCCTGACGTTGGTGGTGGTGGTGGTGGT 1200
W R E A K E C L Y V E P D V G G G G G G
AGCAAAGGTGTTTTTGGTATCGTAACAAGTTCTAAAGACCGACCAACTGCCTGATAGCT 1260
S K G V F W Y R N K F *
GGCCGCGCAAAATCAACGTAAACGTACTTATTAGACTAGTGTTAACTAGGGAAGTTAATA 1320
ATTAATGGTAGGAAAATGTGGAATAGTTGCCTAGTAGTTTTATGTATTAAGTGTGTATT 1380
AATAAACTATATGGTAGAAAAA

FIGURE 5

taaaaaaaaaaggcatttcttttoatcttaagagacagcgaggaagccacgaagataata
gagtgattttcaatctccattttaaggggtgtggaacaatgggtgctggaggcagaatgtc
M G A G G R M S
ggttccaacgagttccaaaaaaacccgaattcaactcactgaagcgagttccataactcaaa
V P T S P K K P E F N S L K R V P Y S K
gccacccttcactctgagtgaaatcaagaaagccatcccaccacactgtttccagcgctc
P P F T L S E I K K A I P P H C F Q R S
cgttttaogctcattctcatatctccttttacgactttatattggcctctcttttttacca
V L R S F S Y L L Y D F I L A S L F Y H
tgtggccaccaattacttccctaaccttccctcaggtctctctccaacgtggcttggcctct
V A T N Y F P N L P Q A L S N V A W P L
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Y W A M Q G C I L T G V W V I A H E C G
ccaccatgctttcagtgattatcaatggcttgacgacaccgtgggccttatcctccactc
H H A F S D Y Q W L D D T V G L I L H S
ttctctcttagttccatattttctcttggaatatagccaccggcgctcaccattctaacac
S L L V P Y F S W K Y S H R R H H S N T
cggttccctcgaaagggatgaagtgttcggttcccaagaaaaaatctgggtttaagatgggtg
G S L E R D E V F V P K K K S G L R W W
ggccaaacacttcaacaatccacgggtcggtttctgtcaatcaccattcaacttaccct
A K H F N N P P G R F L S I T I Q L T L
tgggtggcgcttttacttagcttttcaacgttgccggcgccgcttacgacaggttcgcttg
G W P L Y L A F N V A G R P Y D R F A C
ccactatgacccttacggcccccataattttccgaccgggaacgactccaaatctatatctc
H Y D P Y G P I F S D R E R L Q I Y I S
tgacgccggcgctcctcgtgtgcgctatgcgctctaccgtctcgtgttggccaaagggtg
D A G V L A V A Y A L Y R L V L A K G V
agggtgggttatttagcgtttatgggtggtggttaacgccttcttagtaat
G W V I S V Y G V P L L V V N A F L V M
gatcacgtatttgcacacactcaccatctttgcgcgactatgattcctcgagtggtgga
I T Y L Q H T H P S L P H Y D S S E W D
ctggatgagaggagctttatcaactgtggacagagattatgggatttttaacaagggtttt
W M R G A L S T V D R D Y G I L N K V F
ccataacataaccgacactcatgtggctcatcatttgttttcgacaatgcctcactatca
H N I T D T H V A H H L F S T M P H Y H
tgccatgggtggccaccaaggcgataaagcccatattgggggaataactatcagttcgatgg
A M V A T K A I K P I L G E Y Y Q F D G
gatgcctgtctataaggcgatattggagggaggcggaaggagtgtctctacgttgaaccaga
M P V Y K A I W R E A K E C L Y V E P D
tgagggcgacaaggataaagggtgtgttttgggttagaaacaagctttaaatatttgcatt
E G D K D K G V F W F R N K L *
ttaccttaggcattgttctagtcgttgatgttttaaggatatttttagccgacatacttgggt
tttcttttttgggacttttttagctttgtatttgcagacaataatcttgttcactattaaa
taatggtagaataaatacacagcatggattggcaataaaaa

FIGURE 6

gmpAD2-2 1 --- MGAGGRDVP PAN
atfAD2 1 --- MGAGGRMPVP TSS
gmpAD2-1 1 --- MGAGGRMPD OIK
gmpAD2-1 1 --- MGAGGRMPD OIK
bnpAD3 1 --- MGAGGRMPD OIK
gmpAD6 1 --- MGAGGRMPD OIK

gmpAD2-2 14 KSEVDPP RVP TEXPQF...
atfAD2 14 KSEVDPP RVP TEXPQF...
gmpAD2-1 14 KSEVDPP RVP TEXPQF...
gmpAD2-1 20 VQOK KPE SRVNTKPPF...
bnpAD3 8 SNANQDEPDRSAQEPF...
gmpAD6 71 APVES EYQLAEDYQERQV...

gmpAD2-2 81 LSRAAMAYMAQQGCLTG...
atfAD2 81 LSRAAMAYMAQQGCLTG...
gmpAD2-1 80 FSLAWPLYWACQQGCLTG...
gmpAD2-1 85 FSLAWPLYWACQQGCLTG...
bnpAD3 69 SPTFWPLYMAAQCTFW...
gmpAD6 141 APYLLPLANVWTCATGCF...

gmpAD2-2 151 LERDEVFVPKQKSKYLN...
atfAD2 151 LERDEVFVPKQKSKYLN...
gmpAD2-1 150 LERDEVFVPKQKSKYLN...
gmpAD2-1 155 LERDEVFVPKQKSKYLN...
bnpAD3 138 MENDES RVPLEBKLY...
gmpAD6 211 LKEDTAMP...VQKDETESTEL...

gmpAD2-2 221 ERLQIVTSDAGVAVYGL...
atfAD2 221 ERLQIVTSDAGVAVYGL...
gmpAD2-1 220 ERLQIVTSDAGVAVYGL...
gmpAD2-1 225 ERLQIVTSDAGVAVYGL...
bnpAD3 200 ERLQIVTSDAGVAVYGL...
gmpAD6 267 PRKLS CVPAF...

gmpAD2-2 289 WLRGAL ATVDROYGILNK...
atfAD2 289 WLRGAL ATVDROYGILNK...
gmpAD2-1 288 WLRGAL ATVDROYGILNK...
gmpAD2-1 293 WLRGAL ATVDROYGILNK...
bnpAD3 270 WLRGAL ATVDROYGILNK...
gmpAD6 334 RAOCLNATVHCDYFPAWIE...

gmpAD2-2 358 EALBECYVVEPDQST...
atfAD2 358 EALBECYVVEPDQST...
gmpAD2-1 357 EALBECYVVEPDQST...
gmpAD2-1 362 EALBECYVVEPDQST...
bnpAD3 338 VESLVASUKKDDYVS...
gmpAD6 403 INTVCQVYKNSLCCCLARTCP...

FIGURE 7

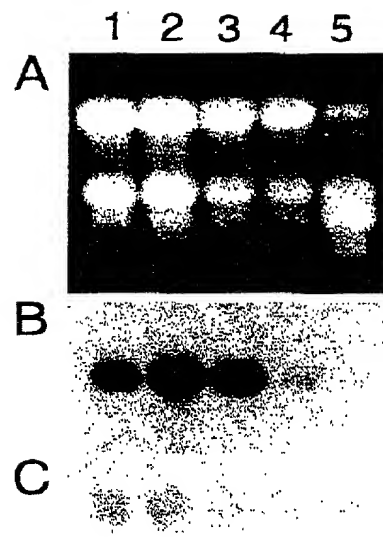


FIGURE 8

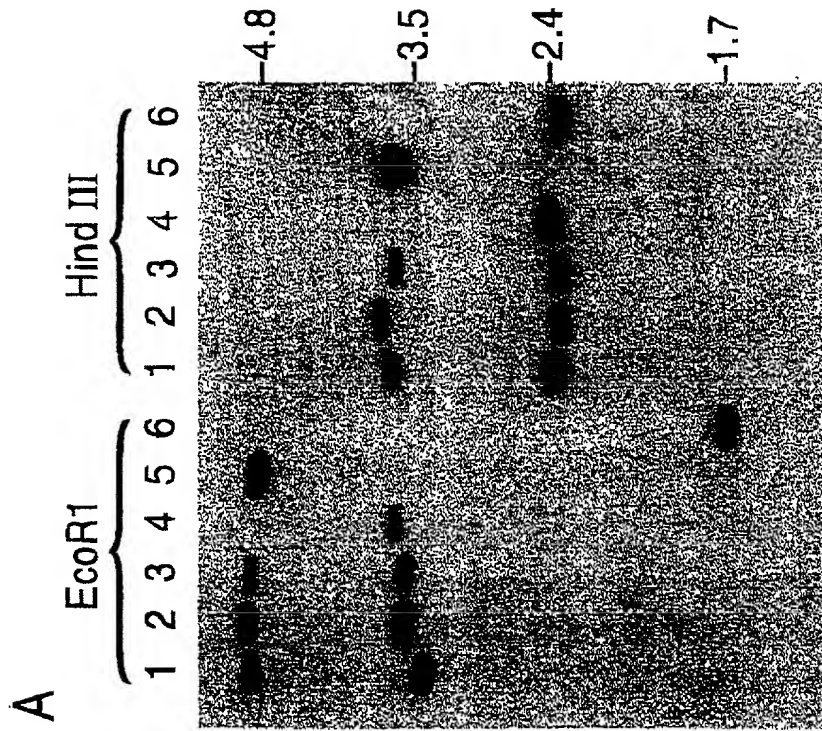


FIGURE 9A

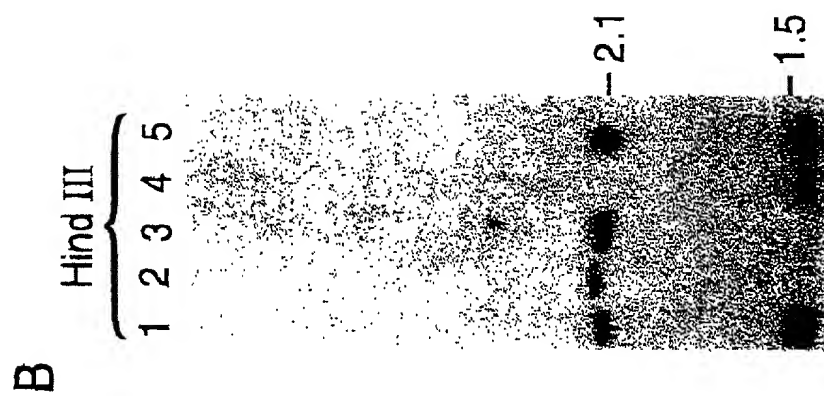


FIGURE 9B

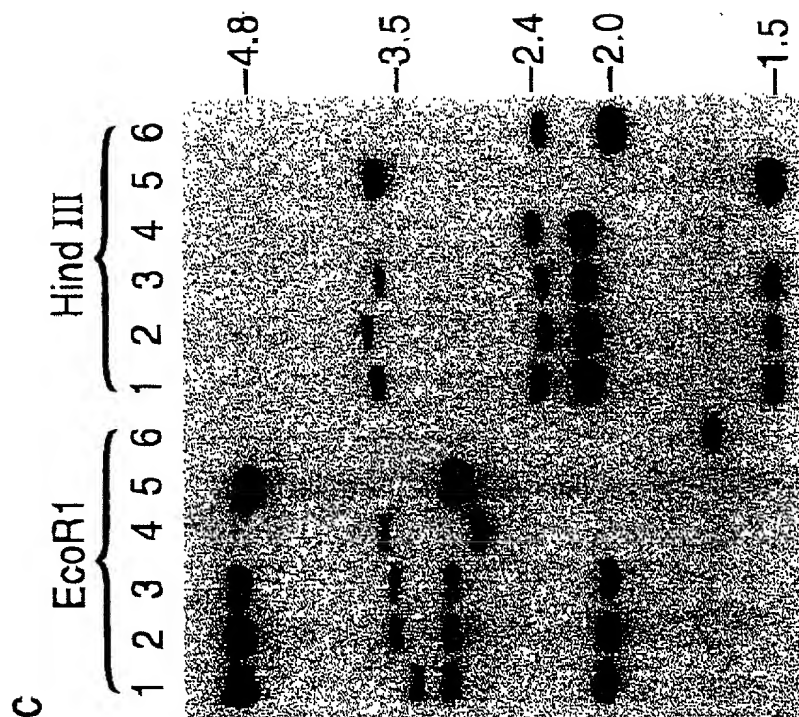


FIGURE 9C

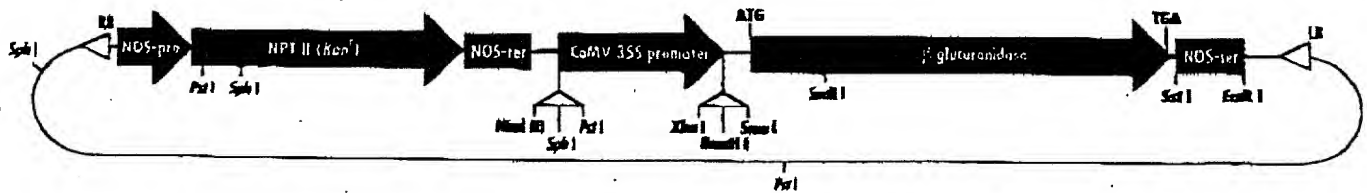
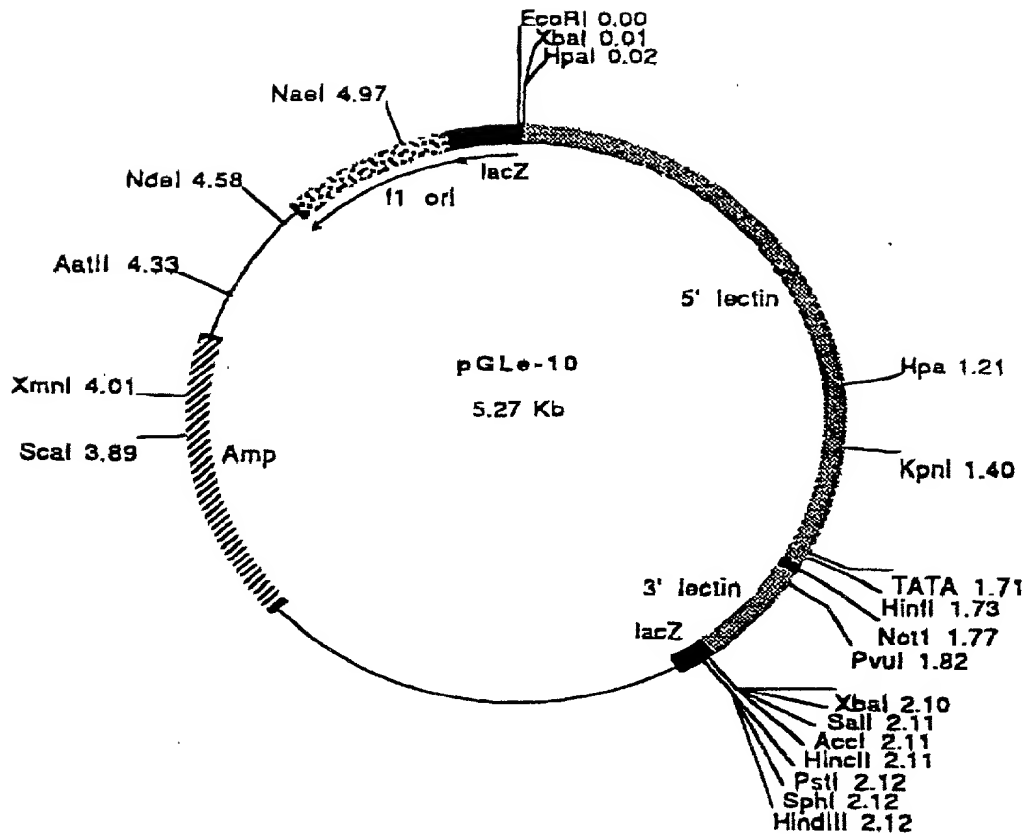


FIGURE 10

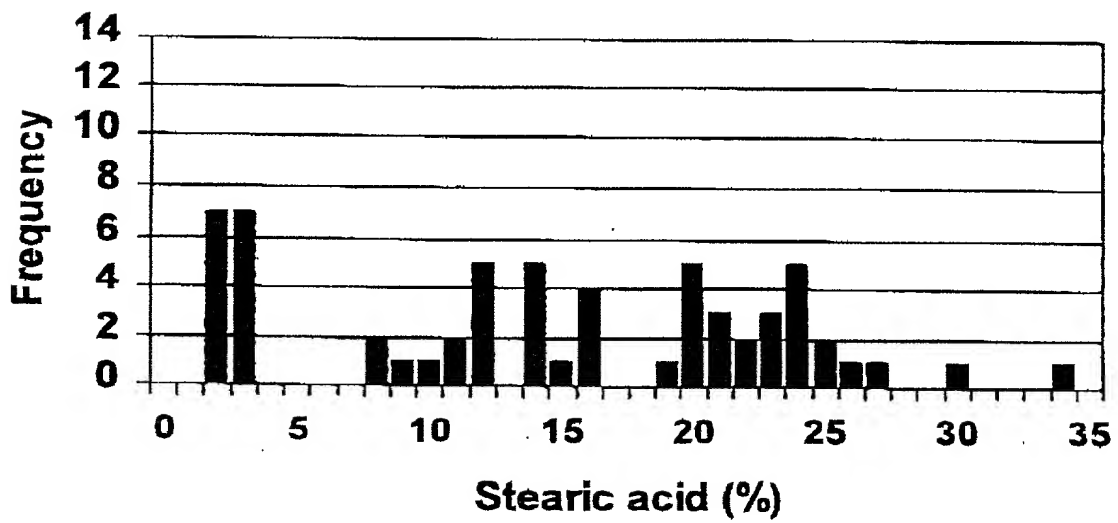
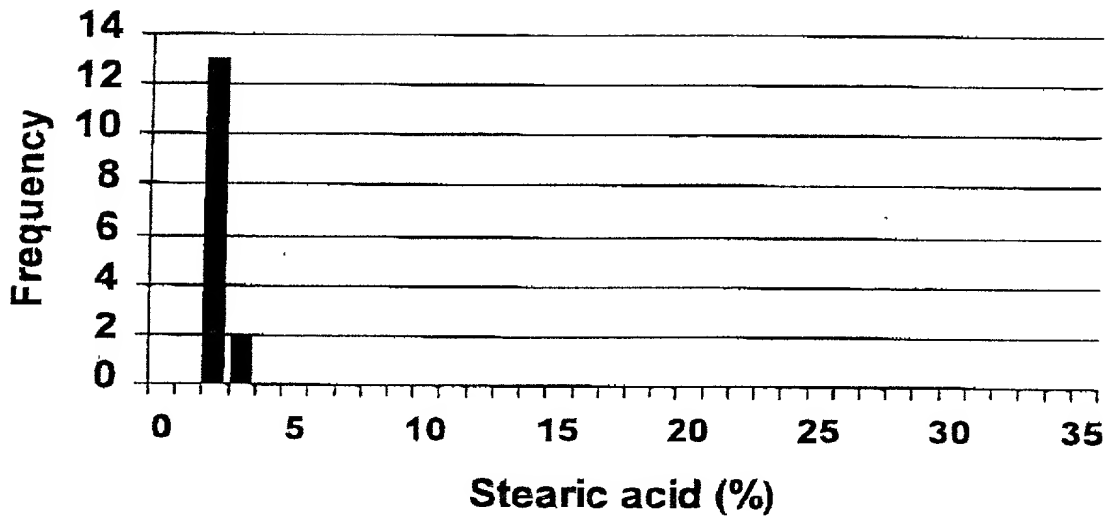


FIGURE 11

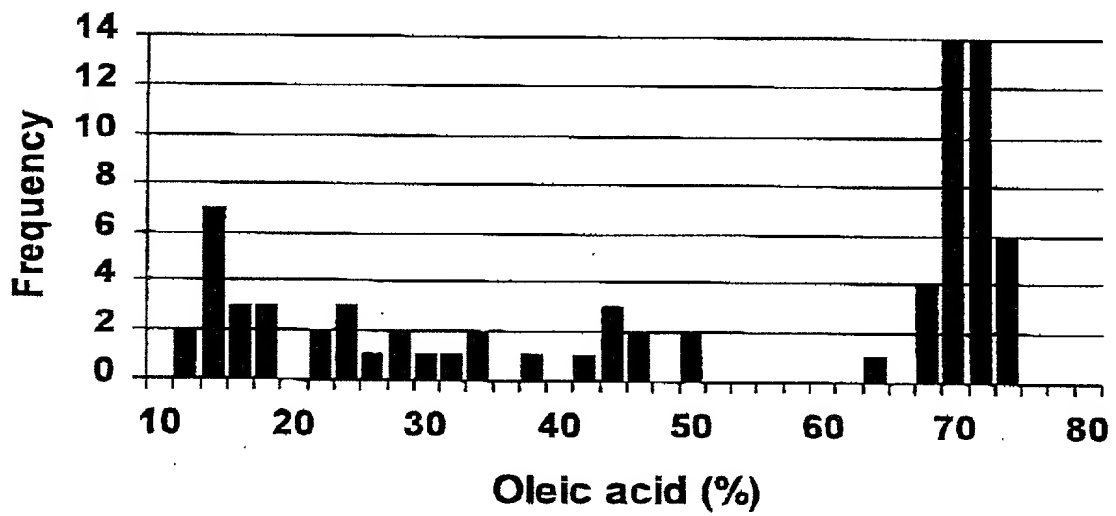
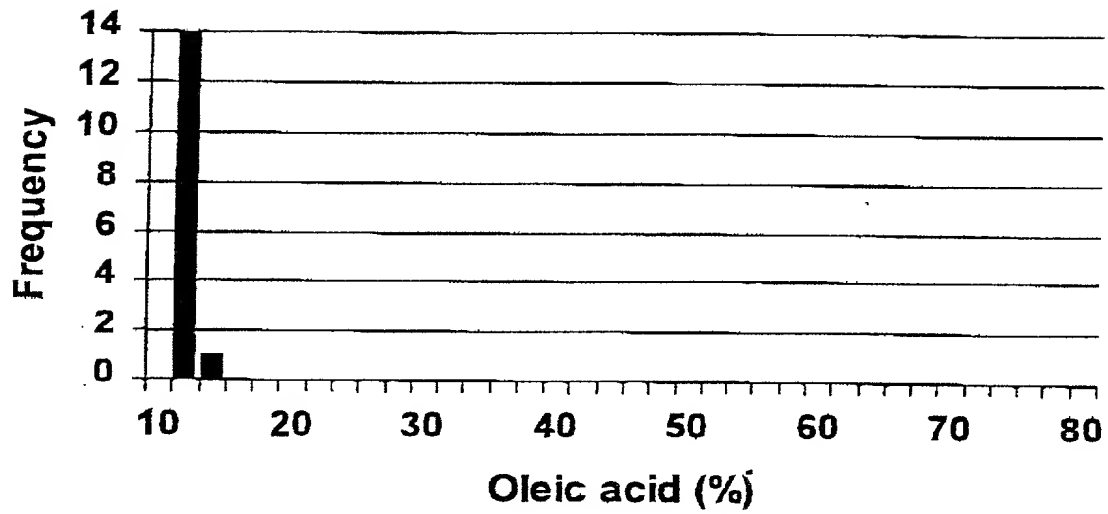


FIGURE 12

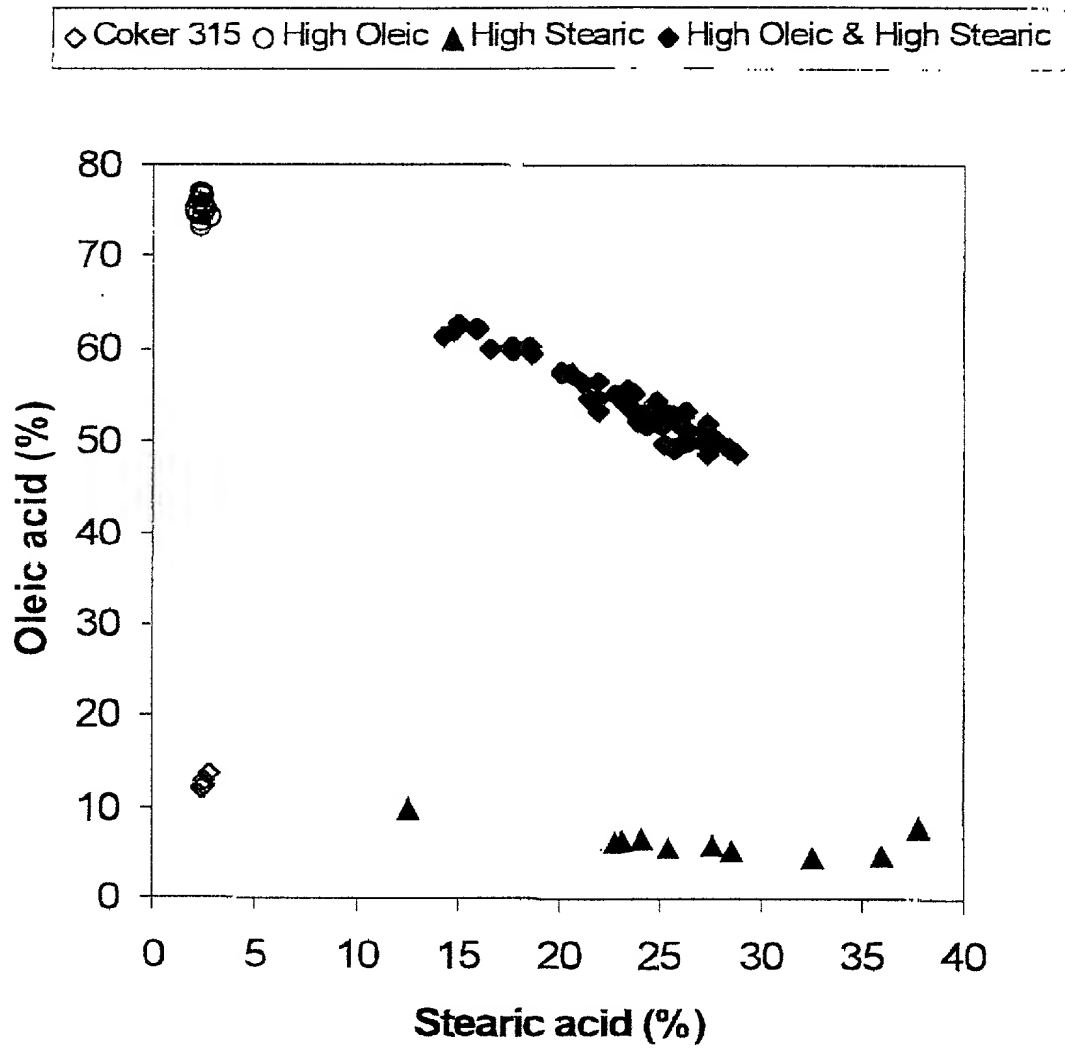


FIGURE 13